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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,363	11/01/2001	Ali Bani-Hashemi	2001P18496US	7290

7590 01/12/2006

Siemens Corporation  
Attn: Elsa Keller, Legal Administrator  
Intellectual Property Department  
186 Wood Avenue South  
Iselin, NJ 08830

EXAMINER
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MANTIS MERCADER, ELENI M

ART UNIT	PAPER NUMBER
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3737

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/004,363

Applicant(s)

BANI-HASHEMI ET AL.

Examiner

Eleni Mantis Mercader

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX(6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,5,7-14,16-18 and 20-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,7-14,16-18 and 20-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed on 10/21/2005 have been fully considered but they are not persuasive. Applicant's attention is directed to the embodiment of Figure 7 of Cosman'072 of record. According to this embodiment, Cosman'072 teaches acquiring first three-dimensional surface data representing at least a portion of a patient's body at a first position (referring to the surface data of the patient obtained by the camera system C4), acquiring second data independent from the first data and representing at least one internal three-dimensional portion of the patient's body while the patient is in the first position (see element 130 which constitutes the 3D imager of interest including ultrasound, CT or MRI ), and acquiring third three-dimensional surface data using cameras C4 when radiation treatment is occurring using the radiotherapy apparatus (elements 5 & 6) and necessarily comparing all the data using element 136, which is a computer or a controller, in order to accurately align all the obtained information and accurately treat the area of interest 7. The therapy system LINAC as well as the images (camera obtained image and scanned) are correlated on the basis of the isocenter point 7 and its 3D location (see col. 3, lines 54-67, col. 6, lines 39-59, and col. 15, line 8-col. 16, line 42).

Furthermore, converting all the data into a common coordinate frame of reference (which appears to be the essence of the current amendments) is inherent otherwise the system is non-functional in that there can be no correlation between all the data.

### ***Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed.

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Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-3, 5, 7-14, 16-18 and 20-23 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-26 of U.S. Patent No. 6,535,574. Although the conflicting claims are not identical, they are not patentably distinct from each other because they represent alternate variations and groupings.

3. Claims 1-3, 5, 7-14, 16-18 and 20-23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of copending Application No. 10/051,588. Although the conflicting claims are not identical, they are not patentably distinct from each other because they represent alternate variations and groupings.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

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subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3, 5, 7-14, 16-18 and 20-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Cosman'072.

Applicant's attention is directed to the embodiment of Figure 7 of Cosman'072 of record. According to this embodiment, Cosman'072 teaches acquiring first three-dimensional surface data representing at least a portion of a patient's body at a first position (referring to the surface data of the patient obtained by the camera system C4), acquiring second data independent from the first data and representing at least one internal three-dimensional portion of the patient's body while the patient is in the first position (see element 130 which constitutes the 3D imager of interest including ultrasound, CT or MRI ), and acquiring third three-dimensional surface data using cameras C4 when radiation treatment is occurring using the radiotherapy apparatus (elements 5 & 6) and necessarily comparing all the data using element 136, which is a computer or a controller, in order to accurately align all the obtained information and accurately treat the area of interest 7.

Cosman'072 teaches a method comprising:

acquiring first data representing a three-dimensional surface of at least a portion of a patient's body while the patient is in a first position (col. 3, lines 34-39; col. 4, lines 13-24; col. 4, lines 35-47; describing how the cameras track in a three-dimensional space the surface of the patient marked by trackable markers and also see col. 16, lines 8-42, describing video views and also see col. 18, lines 34-40; describing 3D surface contour matching);

and acquiring second data representing at least one internal portion of the patient's body while the patient is in the first position (col. 3, lines 29-34).

Regarding claims 2, 14, and 18 Cosman'072 teaches determining a radiation treatment plan based on the first data, the second data, and on data representing a physical layout of a radiation treatment station and a treatment planning device for generating a radiation treatment plan based on the computed tomography data, the first three-dimensional surface data, and data representing a physical layout of a radiation treatment station (see col. 4, lines 48-61 and col. 5, lines 8-45).

Cosman'072 teaches determining the radiation treatment plan comprising: determining a position of a radiation treatment device that will avoid the patient's body and that will allow irradiation of a portion of the at least one internal portion (see col. 7, lines 18-24).

Cosman'072 teaches, the first position being a position that is substantially maintained during a computed tomography scan (see col. 10, lines 19-37), and comparing the CT information with the camera information to determine whether the positional information matches (see col. 10, lines 37-50).

Cosman'072 teaches moving the patient so that the second position corresponds to the first position (see col. 10, lines 50-57 and see col. 13, lines 29-42).

Cosman'072 teaches changing a radiation treatment plan for the patient based on a difference between the first position and the second position (see col. 6, lines 39-59).

Any movements outside of acceptable thresholds or otherwise stated outside of the body boundaries, are detected and corrections are made by moving the patient's body in order to deliver effective treatment (col. 16, lines 60-67 and col. 17, lines 1-48).

Cosman'072 teaches a computed tomography scanning device for acquiring computed tomography data of a patient while the patient is in a scanning position (col. 20, lines 28-31); and

a first surface photogrammetry device for acquiring first three-dimensional surface data of at least a portion of the patient's body while the patient is in the scanning position (col. 20, lines 36-41 and 47-52 and col. 18, lines 34-40).

Cosman'072 further teaches a controller for determining if the treatment position corresponds to the scanning position based on the first three-dimensional surface data and the second three-dimensional surface data (see col. 6, lines 50-59 and col. 10, lines 37-50).

Cosman'072 further teaches the first surface photogrammetry device and the second surface photogrammetry device are a same device (see alternative embodiments of Figures 5 and 6 wherein either 2 cameras or three cameras are used, so in the embodiment of Figure 11, the function of two cameras is accomplished by a single camera or alternatively stated, two cameras are used as opposed to three).

Cosman'072 further teaches the therapy system LINAC as well as the images (camera obtained image and scanned) are correlated on the basis of the isocenter point 7 and its 3D location (see col. 3, lines 54-67, col. 6, lines 39-59, and col. 15, line 8-col. 16, line 42).

Furthermore, converting all the data into a common coordinate frame of reference is inherent otherwise the system is non-functional in that there can be no correlation between all the data.

### ***Conclusion***

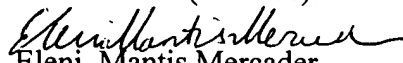
6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eleni Mantis Mercader whose telephone number is (571) 272-4740. The examiner can normally be reached on Mon. - Fri., 8:00 a.m.-6:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on (571) 272-4956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Eleni Mantis Mercader  
Primary Examiner  
Art Unit 3737

EMM